This new arsenical preparation is a white, odorless powder with a weak saline taste, soluble in warm water up to 20 per cent., and contains 37.69 per cent. of arsenic. A series of chronic diseases of the skin, such as alopecia areata, dermatitis herpetiformis, sarcoma of the skin, dermatitis exfoliativa chronica, xanthoma diabeticorum, psoriasis, lichen ruber, were given hypodermic injections of a 20 per cent. solution of the drug, the dose varying from 0.04 to 0.2. In alopecia areata and dermatitis exfoliativa no result was obtained; but in a case of dermatitis herpetiformis a cure was followed in a remarkably short time. In a case of xanthoma diabeticorum improvement was noted after the fourth injection and complete disappearance of the eruption after the twenty-second. In three cases of psoriasis improvement was clearly apparent after five or six injections, but a complete cure was not obtained in any of the cases. Of fourteen cases of lichen ruber treated in this manner, nine were, at the time of writing, completely cured, and the remaining five were rapidly improving. In about 1500 injections no irritation or infiltration worth mentioning was observed. The author is of the opinion that atoxyl represents a decided advance in arsenic therapy.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE CHARGE OF
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On the Multiplicity of Amboceptors and Complements in Hæmolysis. —H. Wendelstadt (*Centralblatt f. Bakteriolog. u. Parasitenkunde*, 1902, No. 10, Band xxxi., p. 469), working on the lines suggested by Ehrlich and Morgenroth, again demonstrates the multiplicity of the amboceptors in hæmolysis. A goat was immunized against the red blood corpuscles of oxen, pigs, and sheep. After the serum of the goat had developed strong hæmolytic properties for red blood cells of the other three animals their red cells were added in turn to the goat's serum, and the mixture kept on ice. By this means the intermediary body (amboceptor) for each kind of red cell was bound to that cell, and the remaining serum was still hæmolytic for the other two varieties of red blood corpuscles. For the separation of the specific complements two methods were used: First, by heating the goat's serum to 49.5° C. from twelve to fifteen minutes it was rendered inactive for both oxen's and sheep's blood, but readily hæmolyzed pig's red corpuscles. The second method consisted in adding dilute hydrochloric acid to varying amounts of goat's serum. Wendelstadt now found that the hæmolytic property of the serum for the different kinds of red blood corpuscles was not all lost at once, but disappeared for the different animal's corpuscles at different dilutions; that is, the complement for oxen's red cells was lost first, next that for pig's blood, and most resistant to the action of acids was the sheep's blood. That the complement and not the intermediary body was injured in these experiments was shown by adding small amounts of fresh complements to the mixture in which no hæmolysis occurred, when dissolution was rapidly complete. By this method Wendelstadt believes he can demonstrate the multiplicity and specificity of the complement.—W. T. L.

A Contribution to the Pathology of Glanders of the Lung.—W. G. MacCallum (*Beiträge zur Pathol. Anat. u. allge. Pathologie*, 1902, Band xxxi., p. 440) describes the lesions found in the lung of a man who died of glanders following an accidental infection with an attenuated culture of the bacillus. At autopsy the lungs were found to contain numerous small, grayish-red firm nodules, both over the pleural surfaces and throughout the lung tissue. Similar nodes were found in the spleen and kidneys. The bacillus mallei was recovered from the nodules in the lung, spleen, and kidney as well as from other situations. From a histological examination the author finds three stages in the development of the nodules in the lung.

In the earliest lesions the centre of the nodule is composed of masses of leucocytes, fibrin, epithelial cells, and débris, the alveoli immediately surrounding this central portion being filled with plugs of fibrin, and outside of this, again, the alveoli containing epithelial cells. Large numbers of bacilli were found in the central portion.

In the second stage the central necrosis was more marked, and the exudate in the surrounding alveoli showed beginning organization.

The last stage is represented by a complete central necrosis, practically surrounded by a capsule of organized connective tissue.

The author, from these studies, agrees with Wright, Ehrlich, and Johne, and considers the process as a localized necrotizing bronchopneumonia.

Observations were made further upon the process of organization in the exudate surrounding the necrotic nodule. Lindeman believed the connective tissue arose from the alveolar epithelium, and Aldnigt, Fraenkel, and others derived the connective-tissue elements from the alveolar walls alone; while Ribbert thought organization took place from the walls of the finer bronchioles. Still other observers consider the greater interlobular septa and pleura as the points of origin. The author found in this case that organization commenced usually by a growth of connective tissue from the alveolar walls, but occasionally the connective-tissue elements also arose from the walls of the small bronchi. In serial sections the fibrin plugs were found to extend from one alveolus into another, or from the finer bronchioles into the alveoli, and the process of organization was followed along the fibrin masses directly from one alveolus to another. Thus an entire system of alveoli might undergo organization, the connective tissue growing from the alveolar wall into the exudate only at one point, and thence extending from one fibrin plug to another.—W. T. L.